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FAX 420-9210 FAX 924-9290

(503) 906-9200 FAX 906-9210 (541) 383-9310 FAX 382-7588

CHAIN OF CU	STODY REPORT	Work Order #:	P1G0344
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CLIENT: Bristol						INVO	ICE TO	13.	risto	/						TUR			EST in Busi		ys*
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PROJECT NAME: Anchit	974	FAX:	170-	097	75	P.O. N			210								5 4	3	2 1	< 1	
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PRINT NAME: Charlie M	larihill	FIRM:	いいりた			TIME:	1		1	NAME:		Si	Lophe	- 6	low	FIRM:	NCA	-		TIME:	1,134
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PRINT NAME:	N	FIRM:	M	13	A 2 2		1/5			NAME:		LM	La	DIE	<u>.</u>	FIRM:	<u> PC</u>	1		TIME:	415
ADDITIONAL REMARKS:	(s CARSE	Ser B	4	j+ 1	te p.	e- lmiu	SMP	- 1		e A		nιΛ	Λπος (151	Λ.	المدال	(ADIL)		TEMP:	DA CE	OF
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 Seattle
 11720 ** th Creek Pkwy N, Suite 400, Bothell, WA 98011-8244

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 30 fax 425.420.9210

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541.383.9310 fax 541.382.7588

8 October, 2001

Steve Johnson Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are amended results of analyses for samples received by the laboratory on 07/11/01 16:15. If you have any questions concerning this report, please feel free to contact me. These results supercede all previous results reported by the laboratory.

Sincerely,

Jerry Orlando

Project Manager/QA

fy aland

Work Orders included in this report:

P1G0344



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

ANALYTICAL REPORT FOR SAMPLES - Amended

				
Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01AMB6U01GW	P1G0344-01	Water	07/10/01 10:45	07/11/01 16:15
01AMB6U02GW	P1G0344-02	Water	07/10/01 10:50	07/11/01 16:15

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMB6U01GW (P1G0344-01) Water					Sampled: 07/10)/01 Rece	ived: 07/11/	01	·····
Gasoline Range Organics Benzene	ND	80.0	ug/l	1	AK101/8021B	07/12/01	07/12/01	1071160	
Toluene	ND	0.500	н	"	II*	н	**	H	
Ethylbenzene	ND ND	0.500	"	"	н	н	н	11	
Xylenes (total)	ND	0.500 1.00	и	**	"	11	11	11	
Surr: 4-BFB (FID) Surr: 4-BFB (PID)	98.8 % 84.6 %	60-140 60-140		710					

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network**

Page 2 of 26



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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103

North Creek Analytical - Portland

Analyte	Result	Reporting							
	Result	Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMB6U01GW (P1G0344-01) Water				5	Sampled: 07/1	0/01 Rece	ived: 07/11/	01	
Diesel Range Organics Residual Range Organics	0.485 ND	0.250 0.500	mg/l	1	AK102/103	07/17/01	07/18/01	1071347	
Surr: 1-Chlorooctadecane Surr: Triacontane	71.1 % 88.1 %	75-125 50-150	<u> </u>			1000			S-07

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
			S	Sampled: 07/1	0/01 Recei	ved: 07/11/0)1	
0.00103	0.00100	mg/l	1	EPA 6020	07/16/01	07/31/01	1071303	
ND	0.00200	11	n	11	11	11	# H	
0.00117 0.00257	0.00100 0.00100	"	11	11	"	"	11	
0.00212	0.00200	"	17	"	"	п	11	
	0.00103 0.00979 ND 0.00117 0.00257	Result Limit 0.00103 0.00100 0.00979 0.00200 ND 0.00100 0.00117 0.00100 0.00257 0.00100 0.00212 0.00200	Result Limit Units 0.00103 0.00100 mg/l 0.00979 0.00200 " ND 0.00100 " 0.00117 0.00100 " 0.00257 0.00100 " 0.00212 0.00200 "	Result Limit Units Dilution Sample Color Color	Result Limit Units Dilution Method Sampled: 07/1 0.00103	Result Limit Units Dilution Method Prepared Sampled: 07/10/01 Recei 0.00103 0.00100 mg/l 1 EPA 6020 07/16/01 0.00979 0.00200 " " " " " ND 0.00100 " " " " " 0.00117 0.00100 " " " " " " 0.00257 0.00100 " " " " " " 0.00212 0.00200 " " " " " "	Result Limit Units Dilution Method Prepared Analyzed Sampled: 07/10/01 Received: 07/11/0 0.00103 0.00100 mg/l 1 EPA 6020 07/16/01 07/31/01 0.00979 0.00200 " " " " " ND 0.00100 " " " " " 0.00117 0.00100 " " " " " 0.00257 0.00100 " " " " " " 0.00212 0.00200 " " " " " "	Result Limit Units Dilution Method Prepared Analyzed Batch Sampled: 07/10/01 Received: 07/11/01 0.00103 0.00100 mg/l 1 EPA 6020 07/16/01 07/31/01 1071303 0.00979 0.00200 " " " " " " " ND 0.00100 " " " " " " " 0.00117 0.00100 "

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Polychlorinated Biphenyls per EPA Method 8082 North Creek Analytical - Portland

				· vieila				
Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
			S	Sampled: 07/1	0/01 Rece	ived: 07/11/	01	
ND	0.500	บฮ/ไ	1					· · · · · · · · · · · · · · · · · · ·
ND	1.00	" "	т	13171 0002	07/17/01			
ND		**	11	11	**			
ND		11	n	**	11			
ND		17	**		n			
ND		Ħ	**	Ħ	Ħ			
ND	0.500	**	11	Ħ	**	11		
75.6 %	44-119							
51.5 %	54-128							S-07
	ND ND ND ND ND ND ND	Result Reporting Limit	Result Reporting Limit Units	Result Limit Units Dilution	ND	Result Reporting Limit Units Dilution Method Prepared Sampled: 07/10/01 Rece ND 0.500 ug/l 1 EPA 8082 07/17/01 ND 1.00 " " " " ND 0.500 " " " " 75.6 % 44-119 44-119 " " " " "	Reporting Limit Units Dilution Method Prepared Analyzed Sampled: 07/10/01 Received: 07/11/0 ND 0.500 ug/l 1 EPA 8082 07/17/01 07/24/01 ND 1.00 " " " " " ND 0.500 " " " " " ND 0.500 " " " " " ND 0.500 " " " " " " ND 0.500 " " " " " " " ND 0.500 "	Result Limit Units Dilution Method Prepared Analyzed Batch

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMB6U01GW (P1G0344-01) Water					Sampled: 07/1	0/01 Recei	ived: 07/11/)1	
Acetone	ND	25.0	ug/l	1	EPA 8260B	07/18/01	07/19/01	1071384	
Benzene	ND	1.00	n	n	"	"	"	10/1304	
Bromobenzene	ND	1.00	11	n	H	11	"	n	
Bromochloromethane	ND	1.00	17		17	11	**	**	
Bromodichloromethane	ND	1.00	U	11	If	и	,,	n	
Bromoform	ND	1.00		11	Ħ	11	н	n	
Bromomethane	ND	5.00	17	n	11	"	ti	н	
2-Butanone	ND	10.0	н	11	17	H	*1	91	
n-Butylbenzene	ND	5.00	**	н	"	11	"	n	
sec-Butylbenzene	ND	1.00	#	п	11	19	*1	**	
tert-Butylbenzene	ND	1.00	,,	н	11	**	Ħ	п	
Carbon disulfide	ND	10.0	17	11	"	11	11	II.	
Carbon tetrachloride	ND	1.00	"	"	n	11	н	,,	
Chlorobenzene	ND	1.00	11	**		11	**	Ħ	
Chloroethane	ND	1.00		n	н	**	**	"	
Chloroform	ND	1.00	11	III	**	"	"	**	
Chloromethane	ND	5.00	"	**		"	**	11	
2-Chlorotoluene	ND	1.00	н	"	"	,,	**	,,	
4-Chlorotoluene	ND	1.00	**	H	"	#	,,	,	
1,2-Dibromo-3-chloropropane	ND	5.00	**	**	17	11	н	,,	
Dibromochloromethane	ND	1.00	11	,,	rr .	"	,,		
1,2-Dibromoethane	ND	1.00	*1	,,	"		"	"	
Dibromomethane	ND ND	1.00	11	*	n	,	,,	 H	
1,2-Dichlorobenzene	ND ND	1.00	17	**	n				
1,3-Dichlorobenzene	ND ND	1.00	n	"		,,	,,	"	
1,4-Dichlorobenzene	ND	1.00	#1	н	11	11	11	,,	
Dichlorodifluoromethane	ND	5.00	,,	11	11	и	11	11	
1,1-Dichloroethane	ND	1.00	н		n	"	**	"	
1,2-Dichloroethane	ND	1.00	**	ti	,,	n	,,	"	
1,1-Dichloroethene	ND	1.00	**	**	n	п	,,	,,	
cis-1,2-Dichloroethene	ND	1.00	11	"	н	н	,,	,,	
trans-1,2-Dichloroethene	ND ND	1.00	0	It	h		и		
1,2-Dichloropropane	ND	1.00	n	**	11	,,	,,		
1,3-Dichloropropane	ND ND	1.00	**	11	н	"	"	,,	
2,2-Dichloropropane	ND ND	1.00	п	n	н	"	" "	"	
1,1-Dichloropropene	ND ND	1.00	н	**	n	,,	"	"	
cis-1,3-Dichloropropene	ND ND	1.00	11	*1	н	"	n	,,	
trans-1,3-Dichloropropene	ND ND	1.00	n	n	"		,,	"	
Ethylbenzene	ND ND	1.00	u	11	"		"	n	

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMB6U01GW (P1G0344-01) Water					Sampled: 07/1	0/01 Recei	ived: 07/11/	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	07/18/01	07/19/01	1071384	
2-Hexanone	ND	10.0	11	"	"	11	1717701	10/1304	
Isopropylbenzene	ND	2.00	**	"	"	"	11	"	
p-Isopropyltoluene	ND	2.00		**	u u	,,	71	17	
4-Methyl-2-pentanone	ND	5.00	"	It	u	,,	11	n	
Methyl tert-butyl ether	ND	1.00	**	11	н	11	H	н	
Methylene chloride	ND	5.00	11	11	11	n	**	,,	
Naphthalene	ND	2.00	n	11	11	п	n	*	
n-Propylbenzene	ND	1.00	11	**	11	*	н	,,	
Styrene	ND	1.00		н	Ħ	11	n	,,	
1,1,1,2-Tetrachloroethane	ND	1.00	n ·	n	**	11	**	н	
1,1,2,2-Tetrachloroethane	ND	1.00		**	н	**	n	11	
Tetrachloroethene	ND	1.00	n	ıı	п	n	"	"	
Toluene	ND	1.00	**		и	19	"	n	
1,2,3-Trichlorobenzene	ND	1.00	"	11	14	If	**	"	
1,2,4-Trichlorobenzene	ND	1.00	"	11	11	"	11	11	
1,1,1-Trichloroethane	ND	1.00	ri	11	n	,,	н	n.	
1,1,2-Trichloroethane	ND	1.00	11	0	н	"	11	n	
Trichloroethene	ND	1.00	**	U	11	н	11	n	
Trichlorofluoromethane	ND	1.00	n	11	n	н	11	"	
1,2,3-Trichloropropane	ND	1.00	H	**	TI TI	Ħ	"	n	
1,2,4-Trimethylbenzene	ND	1.00	Ħ	17	n	11	n	п	
1,3,5-Trimethylbenzene	ND	1.00	п	11	TP	n	11	n	
Vinyl chloride	ND	1.00	11	rt	17	**	11	н	
o-Xylene	ND	1.00	11	"	n	**	11	57	
m,p-Xylene	ND	2.00	Ħ	n	**	n	"	н	
Surr: 4-BFB	91.0 %	75-125							
Surr: 1,2-DCA-d4	101 %	75-125							
Surr: Dibromofluoromethane	98.5 %	75-125							
Surr: Toluene-d8	91.5 %	75-125							

North Creek Analytical - Portland



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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMB6U02GW (P1G0344-02) Water				·	Sampled: 07/1		ived: 07/11/		
Acetone	ND	25.0	ug/l	1	EPA 8260B				1-0
Benzene	ND	1.00	ug/1	,,	EPA 8200B	07/26/01	07/27/01	1071758	
Bromobenzene	ND	1.00	16	11	"	,,	11	.,	
Bromochloromethane	ND	1.00	11	19		"	,,		
Bromodichloromethane	ND	1.00	tt	11	11	"	11	17	
Bromoform	ND	1.00	11	**		" H	H H		
Bromomethane	ND	5.00	11	.,	11	"	"	H	
2-Butanone	ND	10.0	11	**	"	"		Ħ	
n-Butylbenzene	ND	5.00	11		 D	"	"	n	
sec-Butylbenzene	ND ND	1.00	"		"	"	"	Ħ	
ert-Butylbenzene	ND	1.00	"	"	" R	"	"	**	
Carbon disulfide	ND	1.00	" P	 H	"	"	"	Ħ	
Carbon tetrachloride	ND	1.00	"	"	"	"	11	11	
Chlorobenzene	ND	1.00	11	.,	"	**	n .	"	
Chloroethane	ND ND	1.00	"		"	" n		"	
Chloroform	ND	1.00	"		"	" "	"	ii.	
Chloromethane	ND		**	,,	"	"		11	
2-Chlorotoluene	ND ND	5.00	"		"	"	11	"	
4-Chlorotoluene	ND	1.00	,,	" "	"	"		11	
1,2-Dibromo-3-chloropropane	ND ND	1.00	н	*	"		Ħ	11	
Dibromochloromethane		5.00				n	11	n	
1,2-Dibromoethane	ND	1.00	"	"	11	11	Ħ	Ħ	
Dibromomethane	ND	1.00			#	"	**	11	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	11	n	
1,3-Dichlorobenzene	ND	1.00	11	17	#	"	II .	ti	
1,4-Dichlorobenzene	ND	1.00	"	n n	# #	"	н	н	
Dichlorodifluoromethane	ND ND	1.00	"		"	"	н	11	
1,1-Dichloroethane		5.00	"	'n	"	н	11	"	
1,2-Dichloroethane	ND	1.00	"	17		"	II .	11	
1,1-Dichloroethene	ND	1.00	"		"	"	Ħ	11	
cis-1,2-Dichloroethene	ND	1.00		tr	n	"	11	11	
rans-1,2-Dichloroethene	ND	1.00	11	11	11	"	11	H	
1,2-Dichloropropane	ND	1.00		Ħ	11	"	11	11	
1,3-Dichloropropane	ND	1.00	"	n 	"	"	Ħ	11	
2,2-Dichloropropane	ND	1.00	"	11	"	"	11	н	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	n	
cis-1,3-Dichloropropene	ND	1.00	"	"	"	"		Ħ	
rans-1,3-Dichloropropene	ND	1.00	"	"		"	"	"	
Ethylbenzene	ND ND	1.00 1.00	"	"	"		"	11	

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMB6U02GW (P1G0344-02) Water				(Sampled: 07/1	0/01 Rece	ived: 07/11/0)1	I-0
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	07/26/01	07/27/01	1071758	1-0.
2-Hexanone	ND	10.0	11	11	"	07720701	#	10/1/38	
Isopropylbenzene	ND	2.00	11	77	*1	11	11	"	
p-Isopropyltoluene	ND	2.00	78	it	**	**	11	,,	
4-Methyl-2-pentanone	ND	5.00	11	11	н	**	11	11	
Methyl tert-butyl ether	ND	1.00	tt	"	"	**	n	11	
Methylene chloride	11.0	5.00	11	11	H	11	#	ч	
Naphthalene	ND	2.00	11	11	n	**	"		
n-Propylbenzene	ND	1.00	**	11	tt.	"	19	n	
Styrene	ND	1.00	**	11	11	31	11	**	
1,1,1,2-Tetrachloroethane	ND	1.00	11	Ħ	11	11	**	**	
1,1,2,2-Tetrachloroethane	ND	1.00	**	11	11	**	"	n	
Tetrachloroethene	ND	1.00	11	ıı	**	"	II.	n	
Toluene	ND	1.00	71	n	Ħ	**		11	
1,2,3-Trichlorobenzene	ND	1.00	11	u	11	lt.	ır	#1	
1,2,4-Trichlorobenzene	ND	1.00	Ħ	11	71	11	11	11	
1,1,1-Trichloroethane	ND	1.00	Ħ	и	11	н	11	n	
1.1,2-Trichloroethane	ND	1.00	11	ı		"	"	Ħ	
Trichloroethene	ND	1.00	11	11	**	11	n	a	
Trichlorofluoromethane	ND	1.00	n	11	11	n	11	**	
1,2,3-Trichloropropane	ND	1.00	11	n	n	"	11	11	
1,2,4-Trimethylbenzene	ND	1.00	**	11	11	"	11	17	
1,3,5-Trimethylbenzene	ND	1.00	11	it.	ш	Ħ	n	n	
Vinyl chloride	ND	1.00	11	11	11	11	u	11	
o-Xylene	ND	1.00	n	н	11	11	n	н	
m,p-Xylene	ND	2.00	ti .	"	n	19	"	**	
Surr: 4-BFB	106 %	75-125							
Surr: 1,2-DCA-d4	106 %	75-125							
Surr: Dibromofluoromethane	101 %	75-125							
Surr: Toluene-d8	100 %	75-125							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMB6U01GW (P1G0344-01) Water				:	Sampled: 07/1	0/01 Recei	ived: 07/11/0)1	
Acenaphthene	ND	0.100	ug/l	1	EPA 8270m	07/17/01	07/18/01		
Acenaphthylene	ND	0.100	"	n	"	07/17/01	07/10/01	1071339	
Anthracene	ND	0.100	H	"	н		п		
Benzo (a) anthracene	ND	0.100	11	**	**	n	"	n	
Benzo (a) pyrene	ND	0.100	**	"	**	n	**	**	
Benzo (b) fluoranthene	ND	0.100	n	n	n	n	"	11	
Benzo (ghi) perylene	ND	0.100	Ð	н	**	11	1)	11	
Benzo (k) fluoranthene	ND	0.100	Ħ	11	11	н	**	n	
Chrysene	ND	0.100	**	н	11	11	11	**	
Dibenzo (a,h) anthracene	ND	0.200	**	п	n	"	11	11	
Fluoranthene	ND	0.100	**	Ħ	**	,,	н	**	
Fluorene	ND	0.100	31	rr	n	11	"	**	
Indeno (1,2,3-cd) pyrene	ND	0.100	17	н	Ħ	**	"	,,	
Naphthalene	ND	0.100	IT	**	н	*1	11	,,	
Phenanthrene	ND	0.100	**	n	11	•	11	**	
Pyrene	ND	0.100	"	17	н	**	"	n .	
Surr: Fluorene-d10	77.5 %	25-105							
Surr: Pyrene-d10	113 %	30-130							
Surr: Benzo (a) pyrene-d12	87.3 %	22-120							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

	No	rth Creek	Analy	tical - Po	ortland					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071160 - EPA 5030B										
Blank (1071160-BLK1)				Prepared	& Analyze	ed: 07/12/	01			
Gasoline Range Organics	ND	80.0	ug/l			DG. 07/12/	<u> </u>			
Benzene	ND	0.500								
Toluene	ND	0.500	11							
Ethylbenzene	ND	0.500	11							
Xylenes (total)	ND	1.00	"							
Surr: 4-BFB (FID)	54.3	~	"	50.0		109	60-140			
Surr: 4-BFB (PID)	46.7		"	50.0		93.4	60-140			
LCS (1071160-BS1)				Prepared	& Analyza					
Gasoline Range Organics	1380	80.0	ug/l	1250	& Allalyzo	110	70-120			
Surr: 4-BFB (FID)	65.0			50.0		130	60-140			
LCS (1071160-BS2)					0 4 1					
Benzene	15.3	0.500		Prepared	& Anaiyze					
Toluene	15.9	0.500	ug/l	20.0		76.5	75-125			
Ethylbenzene	16.5	0.500	"	20.0		79.5	75-125			
Xylenes (total)	48.2	1.00	"	20.0 60.0		82.5	75-125			
Surr: 4-BFB (PID)	43.1	1.00				80.3	75-125			
	43.1			50.0		86.2	60-140			
LCS Dup (1071160-BSD1)				Prepared .	& Analyze	ed: 07/12/	01			
Gasoline Range Organics	1300	80.0	ug/l	1250		104	70-120	5.97	20	
Surr: 4-BFB (FID)	62.7		"	50.0		125	60-140			
Duplicate (1071160-DUP1)	So	urce: P1G035	56-01	Prepared	& Analyze	ed: 07/12/	01			
Gasoline Range Organics	ND	80.0	ug/l		ND		· · · · · · · · · · · · · · · · · · ·		20	
Surr: 4-BFB (FID)	54.4		"	50.0		109	60-140			
Matrix Spike (1071160-MS1)	So	urce: P1G035	56-02	Prepared	& Analyze	ed: 07/12/				
Benzene	17.0	0.500	ug/l	20.0	ND	85.0	75-125			
Гоluene	17.4	0.500	"	20.0	ND	87.0	75-125			
Ethylbenzene	18.0	0.500	**	20.0	ND	90.0	75-125			
Xylenes (total)	52.4	1.00	"	60.0	ND	87.3	75-125			
C										

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Surr: 4-BFB (PID)

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

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Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071160 - EPA 5030B			_					· · · · · · · · · · · · · · · · · · ·		71000
Matrix Spike Dup (1071160-MSD1)	Soi	urce: P1G03	56-02	Prepared	& Analyze	ed: 07/12/	n 1			
Benzene	15.9	0.500	ug/l	20.0	ND	79.5				
Toluene	16.2	0.500	u _D ,		·-		75-125	6.69	20	
Ethylbenzene				20.0	ND	81.0	75-125	7.14	20	
•	16.6	0.500		20.0	ND	83.0	75-125	8.09	20	
Xylenes (total)	48.2	1.00	"	60.0	ND	80.3	75-125	8.35	20	
Surr: 4-BFB (PID)	42.5		"	50.0		85.0	60-140			

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

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Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071347 - EPA 3510 Fuels		_								
Blank (1071347-BLK1)				Prepared:	07/17/01	Analyzac	l: 07/18/01			
Diesel Range Organics	ND	0.250	mg/l	r repared.	07/17/01	Allalyzec	1: 07/18/01			
Residual Range Organics	ND	0.500	"							
Surr: 1-Chlorooctadecane	0.0740		"	0.0960		77.1	75-125	. <u> </u>		
Surr: Triacontane	0.104		"	0.125		83.2	50-150			
LCS (1071347-BS1)				Drangrad:	07/17/01		i: 07/18/01			
Diesel Range Organics	2.39	0.250	mg/l	2.58	07/17/01	92.6	60-130			
Residual Range Organics	1.21	0.500	"	1.58		76.6	60-130			
Surr: 1-Chlorooctadecane	0.0752		"	0.0960		78.3	75-125			
Surr: Triacontane	0.119		"	0.125		95.2	50-150			
LCS Dup (1071347-BSD1)				Prepared:	07/17/01	Analyzed	: 07/18/01			
Diesel Range Organics	2.43	0.250	mg/l	2.58		94.2	60-130	1.66	20	
Residual Range Organics	1.20	0.500	"	1.58		75.9	60-130	0.830	20	
Surr: 1-Chlorooctadecane	0.0774		,,	0.0960		80.6	75-125			
Surr: Triacontane	0.132		,,	0.125		106	50-150			

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

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Total Metals per EPA 6000/7000 Series Methods - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071303 - EDA 200/2005										11000

Batch	1071303 -	EPA	200/3005

Blank (1071303-BLK1)				Promound 07/1/2/01 4 1 1 27/1/2/01
Arsenic	ND	0.00100	- ma/l	Prepared: 07/16/01 Analyzed: 07/31/01
Barium	ND	0.00100	mg/l	
Cadmium	ND	0.00200	11	
Chromium	ND	0.00100	11	
Lead	ND	0.00100	n	
Nickel	ND	0.00100	"	
Vanadium	ND	0.00200	n	

LCS (10/1303-BS1)				Prepared: 07/16/01	Analyze	d: 07/31/01
Arsenic	0.106	0.00100	mg/l	0.100	106	80-120
Barium	0.101	0.00200	11	0.100	101	80-120
Cadmium	0.104	0.00100	r!	0.100	104	80-120
Chromium	0.0987	0.00100	11	0.100	98.7	80-120
Lead	0.102	0.00100	н	0.100	102	80-120
Nickel	0.0991	0.00200	н	0.100	99.1	80-120
Vanadium	0.0968	0.00500		0.100	06.8	90 120

Duplicate (1071303-DUP1)	So	urce: P1G026	8-01	Prepared: 07/16/01 Analyzed: 08/02/01			
Arsenic	ND	0.0100	mg/l	ND	89.8	20	O 06 D 02
Barium	0.0348	0.0200	*	0.0332	4.71		Q-06,R-03
Cadmium	ND	0.0100	"	ND	4./1	20	R-03
Chromium	ND	0.0100	n			20	R-03
Lead	ND		.,	ND	23.1	20	Q-06,R-03
Nickel		0.0100	,,	ND		20	R-03
Vanadium	ND	0.0200		ND	0.00	20	R-03
v anadrani	ND	0.0500	"	ND	52.6	20	Q-06,R-03

									Q-00,K-03
Matrix Spike (1071303-MS1)	Sou	rce: P1G026	68-01	Prepared:	07/16/01	Analyze	d: 08/02/01		
Arsenic	0.110	0.0100	mg/l	0.100	ND	107	75-125	 	R-03
Barium	0.139	0.0200	"	0.100	0.0332	106	75-125		R-03
Cadmium	0.0980	0.0100	"	0.100	ND	98.0	75-125		R-03
Chromium	0.115	0.0100	**	0.100	ND	113	75-125		R-03
Lead	0.0975	0.0100	ıt	0.100	ND	97.5	75-125		R-03
Nickel	0.107	0.0200	**	0.100	ND	105	75-125		R-03
Vanadium	0.114	0.0500	n	0.100	ND	113	75-125		R-03

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Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Steve Johnson

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Total Metals per EPA 6000/7000 Series Methods - Quality Control

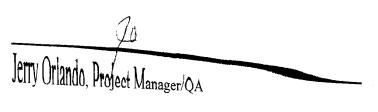
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

Batch 1071303 - EPA 200/3005

Matrix Spike (1071303-MS2)	Sou	rce: P1G042	27-01	Prepared:	07/16/01	Analyze	d: 07/31/01	
Arsenic	0.128	0.0148	mg/l	0.100	ND	125	75-125	
Barium	0.118	0.00200	"	0.100	0.0136	104	75-125	
Change	0.100	0.00100	**	0.100	ND	100	75-125	
Chromium Lead	0.191	0.00100	**	0.100	0.0703	121	75-125	
Nickel	0.0948	0.00100	11	0.100	ND	94.0	75-125	
Vanadium	0.131	0.00200	н	0.100	0.0192	112	75-125	
v anadium	0.814	0.00500	H	0.100	0.722	92.0	75-125	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

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Polychlorinated Biphenyls per EPA Method 8082 - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071341 - EPA 3510/600 Series										
Blank (1071341-BLK1)				Drangrad:	07/17/01	A 1 1	07/24/01			
Aroclor 1016	ND	0.500	ug/l	repared.	07/17/01	Analyzed	: 07/24/01			
Aroclor 1221	ND	1.00	"							
Aroclor 1232	ND	0.500	**							
Aroclor 1242	ND	0.500	11							
Aroclor 1248	ND	0.500	"							
Aroclor 1254	ND	0.500	n							
Aroclor 1260	ND	0.500	n							
Surr: 2,4,5,6-Tetrachloro-m-xylene	0.597	* *	,	0.500		119	44-119		·	
Surr: Decachlorobiphenyl	0.623		"	0.500		125	54-128			
LCS (1071341-BS2)				Prepared:	07/17/01	Apalyzed	. 07/24/01			
Aroclor 1016	4.82	0.500	ug/l	5.00	37/17/01	96.4	45-145			
Aroclor 1260	5.10	0.500	"	5.00		102	47-155			
Surr: 2.4,5,6-Tetrachloro-m-xylene	0.356		"	0.500		71.2	44-119			*
Surr: Decachlorobiphenyl	0.461		"	0.500		92.2	54-128			

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Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Steve Johnson

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Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch	107	1384	- E	PA	5030B	

Blank (1071384-BLK1)				Prepared: 07/18/01 Analyzed: 07/19/01
Acetone	ND	25.0	ug/l	1 topared: 07/10/01 Fanalyzed: 07/19/01
Benzene	ND	1.00	"	
Bromobenzene	ND	1.00	н	
Bromochloromethane	ND	1.00	11	
Bromodichloromethane	ND	1.00	11	
Bromoform	ND	1.00	H	
Bromomethane	ND	5.00	H	
2-Butanone	ND	10.0	71	
-Butylbenzene	ND	5.00	**	
ec-Butylbenzene	ND	1.00	u	
ert-Butylbenzene	ND	1.00	17	
Carbon disulfide	ND	10.0	п	
Carbon tetrachloride	ND	1.00	**	
Chlorobenzene	ND	1.00	n	
Chloroethane	ND	1.00	,,	
Chloroform	ND	1.00	,,	
Chloromethane	ND	5.00	**	
-Chlorotoluene	ND	1.00	11	
-Chlorotoluene	ND	1.00	,,	
,2-Dibromo-3-chloropropane	ND	5.00	н	
Dibromochloromethane	ND	1.00	11	
,2-Dibromoethane	ND	1.00	"	
Dibromomethane	ND	1.00	"	
,2-Dichlorobenzene	ND	1.00	4	
,3-Dichlorobenzene	ND	1.00	11	
,4-Dichlorobenzene	ND	1.00	11	
Dichlorodifluoromethane	ND	5.00	11	
,1-Dichloroethane	ND	1.00	n	
,2-Dichloroethane	ND	1.00	н	
,1-Dichloroethene	ND	1.00	**	
is-1,2-Dichloroethene	ND	1.00	#	
rans-1,2-Dichloroethene	ND	1.00	n	
,2-Dichloropropane	ND	1.00	н	
,3-Dichloropropane	ND	1.00	**	
,2-Dichloropropane	ND	1.00	If	
,l-Dichloropropene	ND	1.00	17	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

i											
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

Batch 10713	84 - EPA	5030B
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Blank (1071384-BLK1)				Prepared: 07/19/01 April 1 07/10/01
cis-1,3-Dichloropropene	ND	1.00	ug/l	Prepared: 07/18/01 Analyzed: 07/19/01
trans-1,3-Dichloropropene	ND	1.00	ug)i	
Ethylbenzene	ND	1.00	tr	
Hexachlorobutadiene	ND	2.00	11	
2-Hexanone	ND	10.0		
Isopropylbenzene	ND	2.00	11	
p-Isopropyltoluene	ND	2.00	**	
4-Methyl-2-pentanone	ND	5.00	11	
Methyl tert-butyl ether	ND	1.00	,,	
Methylene chloride	ND	5.00	n	
Naphthalene	ND	2.00	H	
n-Propylbenzene	ND	1.00	11	
Styrene	ND	1.00	11	
1,1,1,2-Tetrachloroethane	ND	1.00	17	
1,1,2,2-Tetrachloroethane	ND	1.00	**	
Tetrachloroethene	ND	1.00	**	
Toluene	ND	1.00	11	
1,2,3-Trichlorobenzene	ND	1.00	11	
1,2,4-Trichlorobenzene	ND	1.00	11	
1,1,1-Trichloroethane	ND	1.00	n	
1,1,2-Trichloroethane	ND	1.00	*	
Trichloroethene	ND	1.00	n	
Trichlorofluoromethane	ND	1.00	n	
1,2,3-Trichloropropane	ND	1.00	"	
1,2,4-Trimethylbenzene	ND	1.00	11	
1,3,5-Trimethylbenzene	ND	1.00	Ħ	
Vinyl chloride	ND	1.00	11	
o-Xylene	ND	1.00	n	
n,p-Xylene	ND	2.00	11	
Surr: 4-BFB	18.6		"	20.0 93.0 75-125
Surr: 1,2-DCA-d4	18.7		"	20.0 93.5 75-125
Surr: Dibromofluoromethane	18.8		"	20.0 94.0 75-125
Surr: Toluene-d8	18.7		"	20.0 93.5 75-125

North Creek Analytical - Portland

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North Creek Analytical, Inc. Environmental Laboratory Network Page 18 of 26



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

	2. Con i mary treat 1 of trains										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch 1071384 - EPA 5030B									ZJAIII.	Hotes	
LCS (1071384-BS1)				Prepared:	07/18/01	Analyzed	: 07/19/01				
Benzene	21.2	1.00	ug/l	20.0	01110/01	106	80-125			-	
Chlorobenzene	20.4	1.00	"	20.0		102	80-125				
,1-Dichloroethene	18.6	1.00	"	20.0		93.0	70-135				
oluene on the state of the stat	21.5	1.00	"	20.0		108	80-125				
richloroethene	23.3	1.00	**	20.0		116	70-130				
Turr: 4-BFB	21.9		"	20.0		110	75-125			··-	
Surr: 1,2-DCA-d4	18.8		"	20.0		94.0	75-125 75-125				
Surr: Dibromofluoromethane	18.6		"	20.0		93.0	75-125 75-125				
Surr: Toluene-d8	19.5		"	20.0		97.5	75-125 75-125				
CS Dup (1071384-BSD1)				Prepared:	07/18/01	Analyzed					
Benzene	21.8	1.00	ug/l	20.0		109	80-125	2.79	25		
Chlorobenzene	21.0	1.00	11	20.0		105	80-125	2.90	25		
,1-Dichloroethene	19.5	1.00	17	20.0		97.5	70-135	4.72	25		
oluene	22.2	1.00	**	20.0		111	80-125	3.20	25		
richloroethene	24.0	1.00	"	20.0		120	70-130	2.96	25 25		
urr: 4-BFB	21.6		"	20.0		108	75-125				
urr: 1,2-DCA-d4	18.6		"	20.0		93.0	75-125 75-125				
urr: Dibromofluoromethane	18.6		"	20.0		93.0	75-125 75-125				
urr: Toluene-d8	19.3		"	20.0		96.5	75-125				
Matrix Spike (1071384-MS1)	Sour	ce: P1G044	18-07	Prepared:	07/18/01	Analyzed	: 07/19/01				
Benzene	20.6	1.00	ug/l	20.0	ND	103	80-125				
Chlorobenzene	19.4	1.00	11	20.0	ND	97.0	80-125				
,1-Dichloroethene	19.3	1.00	11	20.0	ND	96.5	70-135				
oluene	20.6	1.00	u	20.0	ND	103	80-125				
richloroethene	18.9	1.00	"	20.0	ND	94.5	70-130				
urr: 4-BFB	21.1		"	20.0		106	75-125				
urr: 1,2-DCA-d4	18.4		"	20.0		92.0	75-125				
urr: Dibromofluoromethane	18.5		"	20.0		92.5	75-125				
urr: Toluene-d8	19.2		,,	20.0							

North Creek Analytical - Portland

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North Creek Analytical, Inc. Page 19 of 26 **Environmental Laboratory Network**



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

Batch 1071384 - EPA 5030B

Matrix Spike Dup (1071384-MSD1)	Sour	Source: P1G0448-07			07/18/01				
Benzene	21.8	1.00	ug/l	20.0	ND	109	80-125	5.66	25
Chlorobenzene	19.9	1.00	"	20.0	ND	99.5	80-125	2.54	25
1,1-Dichloroethene	20.6	1.00	п	20.0	ND	103			25
Toluene	21.2	1.00	н	20.0	ND		70-135	6.52	25
Trichloroethene	19.9	1.00				106	80-125	2.87	25
Surr: 4-BFB		1.00		20.0	ND	99.5	70-130	5.15	25
-	21.1		"	20.0		106	75-125		
Surr: 1,2-DCA-d4	18.5		"	20.0		92.5	75-125		
Surr: Dibromofluoromethane	18.4		"	20.0		92.0	75-125		
Surr: Toluene-d8	19.2		n	20.0		96.0	75-125		

Batch 1071758 - EPA 5030B

Blank (1071758-BLK1)				Prepared & Analyzed: 07/26/01
Acetone	ND	25.0	ug/l	7.15pared & Fillary2201. 07/20/01
Benzene	ND	1.00	"	
Bromobenzene	ND	1.00	,,	
Bromochloromethane	ND	1.00	"	
Bromodichloromethane	ND	1.00	Ħ	
Bromoform	ND	1.00	**	
Bromomethane	ND	5.00	n	
2-Butanone	ND	10.0	n	
n-Butylbenzene	ND	5.00	11	
sec-Butylbenzene	ND	1.00	**	
tert-Butylbenzene	ND	1.00		
Carbon disulfide	ND	10.0	11	
Carbon tetrachloride	ND	1.00	"	
Chlorobenzene	ND	1.00	*1	
Chloroethane	ND	1.00	*1	
Chloroform	ND	1.00	**	
Chloromethane	ND	5.00	**	
2-Chlorotoluene	ND	1.00	11	
4-Chlorotoluene	ND	1.00	"	
1,2-Dibromo-3-chloropropane	ND	5.00	н	
Dibromochloromethane	ND	1.00	Ħ	
1,2-Dibromoethane	ND	1.00	"	
Dibromomethane	ND	1,00	•	

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North Creek Analytical, Inc.
Environmental Laboratory Network
Page 20 of 26



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

1											
Analyte	Result	Reporting	** 1.	Spike	Source		%REC		RPD		
	Kesuit	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	ı

Batch 1071758 - EPA 5030B

Blank (1071758-BLK1)				Prepared & Analyzed: 07/26/01
1,2-Dichlorobenzene	ND	1.00	ug/l	1 repared & Analyzed, 67/20/01
1,3-Dichlorobenzene	ND	1.00	"	
1,4-Dichlorobenzene	ND	1.00	**	
Dichlorodifluoromethane	ND	5.00	**	
1,1-Dichloroethane	ND	1.00	n	
1,2-Dichloroethane	ND	1.00	**	
1,1-Dichloroethene	ND	1.00	**	
cis-1,2-Dichloroethene	ND	1.00	51	
trans-1,2-Dichloroethene	ND	1.00	n	
1,2-Dichloropropane	ND	1.00	11	
1,3-Dichloropropane	ND	1.00	11	
2,2-Dichloropropane	ND	1.00	11	
l,1-Dichloropropene	ND	1.00	11	
cis-1,3-Dichloropropene	ND	1.00	17	
trans-1,3-Dichloropropene	ND	1.00	"	
Ethylbenzene	ND	1.00	11	
Hexachlorobutadiene	ND	2.00	17	
2-Hexanone	ND	10.0	n	
sopropylbenzene	ND	2.00	11	
p-Isopropyltoluene	ND	2.00	"	
4-Methyl-2-pentanone	ND	5.00	**	
Methyl tert-butyl ether	ND	1.00	11	
Methylene chloride	ND	5.00	19	
Naphthalene	ND	2.00	n	
n-Propylbenzene	ND	1.00	н	
Styrene	ND	1.00	**	
1,1,1,2-Tetrachloroethane	ND	1.00	**	
1,1,2,2-Tetrachloroethane	ND	1.00	11	
Tetrachloroethene	ND	1.00	11	
Toluene	ND	1.00	ır	
1,2,3-Trichlorobenzene	ND	1.00	"	
1,2,4-Trichlorobenzene	ND	1.00	11	
1,1,1-Trichloroethane	ND	1.00	n	
1,1,2-Trichloroethane	ND	1.00	11	
Trichloroethene	ND	1.00	и	
Trichlorofluoromethane	ND	1.00	71	

North Creek Analytical - Portland

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North Creek Analytical, Inc. Page 21 of 26 **Environmental Laboratory Network**



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Dotah 1051550 ED 4 50000											1

Batch	107	1758 -	EPA	5030B

Blank (1071758-BLK1)				Prepared	& Analyz	ed: 07/24	/O.1
1,2,3-Trichloropropane	ND	1.00	ug/l	repared	c Allaryz	cu. 07/20	UI
1,2,4-Trimethylbenzene	ND	1.00	ug/I				
1,3,5-Trimethylbenzene	ND	1.00	17				
Vinyl chloride	ND	1.00	**				
o-Xylene	ND	1.00	n				
m,p-Xylene	ND	2.00	11				
Surr: 4-BFB	20.5		"	20.0		102	75-125
Surr: 1,2-DCA-d4	20.4		"	20.0		102	75-125
Surr: Dibromofluoromethane	20.2		"	20.0		101	75-125
Surr: Toluene-d8	20.3		"	20.0		102	75-125 75-125
LCS (1071758-BS1)				Prepared a	& Analus	ed: 07/24	/Ω1
Benzene	19.6	1.00	ug/l	20.0	w manyz	98.0	80-125
Chlorobenzene	18.8	1.00	"	20.0		94.0	80-125
1,1-Dichloroethene	18.0	1.00	11	20.0		90.0	70-135
Toluene	19.4	1.00	,,	20.0		97.0	80-125
Trichloroethene	19.6	1.00	11	20.0		98.0	70-130
Surr: 4-BFB	20.5		"	20.0		102	75-125
Surr: 1.2-DCA-d4	20.0		"	20.0		100	75-125
Surr: Dibromofluoromethane	19.4		**	20.0		97.0	75-125
Surr: Toluene-d8	20.4		"	20.0		102	75-125
Matrix Spike (1071758-MS1)	Sour	ce: P1G057	70-01	Prepared a	& Analyz	ed: 07/26/	01
Benzene	20.4	1.00	ug/l	20.0	ND	102	80-125
Chlorobenzene	18.9	1.00	11	20.0	ND	94.5	80-125
1,1-Dichloroethene	20.3	1.00	n	20.0	ND	102	70-135
Toluene	19.1	1.00	n	20.0	ND	95.5	80-125
Trichloroethene	19.8	1.00	и	20.0	ND	99.0	70-130
Surr: 4-BFB	19.9		"	20.0		99.5	75-125
Surr: 1,2-DCA-d4	20.1		"	20.0		100	75-125
Surr: Dibromofluoromethane	20.5		"	20.0		102	75-125
Surr: Toluene-d8	20.1		"	20.0		100	75-125

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting		Spike	Source		%REC		RPD	Į
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch	1071	758 -	EPA	5030B

Matrix Spike Dup (1071758-MSD1)	Sour	Source: P1G0570-01			Prepared & Analyzed: 07/26/01				
Benzene	21.0	1.00	ug/l	20.0	ND	105	80-125	2.00	25
Chlorobenzene	18.9	1.00	11	20.0	ND	94.5	80-125	2.90 0.00	25 25
1,1-Dichloroethene	20.5	1.00	"	20.0	ND	102	70-135	0.980	25 25
Toluene	19.6	1.00	**	20.0	ND	98.0	80-125	2.58	25
Trichloroethene	19.7	1.00	11	20.0	ND	98.5	70-130	0.506	25
Surr: 4-BFB	20.1		"	20.0		100	75-125		
Surr: 1,2-DCA-d4	19.8		"	20.0		99.0	75-125		
Surr: Dibromofluoromethane	20.1		"	20.0		100	75-125		
Surr: Toluene-d8	20.6		"	20.0		103	75-125		

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Steve Johnson

Amended Report

Issued: 10/08/01 14:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North Creek Analytical - Portland

Analyte	D 1:	Reporting		Spike	Source		%REC		RPD	
- Amyto	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1071339 - EPA 3520/600 Series

Blank (1071339-BLK1)				Prepared: 07/1	17/01 Analyzed	1. 07/19/01		
Acenaphthene	ND	0.100	ug/l	repared. 077	17701 Allalyzec	1. 07/18/01		
Acenaphthylene	ND	0.100	"					
Anthracene	ND	0.100	п					
Benzo (a) anthracene	ND	0.100	71					
Benzo (a) pyrene	ND	0.100	11					
Benzo (b) fluoranthene	ND	0.100	u					
Benzo (ghi) perylene	ND	0.100	11					
Benzo (k) fluoranthene	ND	0.100	11					
Chrysene	ND	0.100	11					
Dibenzo (a,h) anthracene	ND	0.200	n	•				
Fluoranthene	ND	0.100	**					
Fluorene	ND	0.100						
Indeno (1,2,3-cd) pyrene	ND	0.100	"					
Naphthalene	ND	0.100	н					
Phenanthrene	ND	0.100	**					
Pyrene	ND	0.100	r					
Surr: Fluorene-d10	1.99		"	2.50	79.6	25-105		
Surr: Pyrene-d10	2.79		"	2.50	112	30-130		
Surr: Benzo (a) pyrene-d12	2.18		"	2.50	87.2	22-120		
LCS (1071339-BS1)				Prepared: 07/1	7/01 Analyzed	1: 07/18/01		
Acenaphthene	1.87	0.100	ug/l	2.50	74.8	26-135		
Benzo (a) pyrene	2.09	0.100	"	2.50	83.6	38-137		
Pyrene	2.16	0.100	*	2.50	86.4	33-133		
Surr: Fluorene-d10	1.97		"	2,50	78.8	25-105		
Surr: Pyrene-d10	2.69		"	2.50	108	30-130		
Surr: Benzo (a) pyrene-d12	2.09		"	2.50	83.6	22-120		

North Creek Analytical - Portland





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%REC

Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Steve Johnson

Amended Report Issued: 10/08/01 14:17

RPD

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

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Spike

Source

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071339 - EPA 3520/600 Series										
LCS Dup (1071339-BSD1)				Prepared:	07/17/01	Analyzed	l: 07/18/01			···
Acenaphthene	1.95	0.100	ug/l	2.50		78.0	26-135	4.19	60	
Benzo (a) pyrene	2.17	0.100	"	2.50		86.8	38-137	3.76	60	
Pyrene	2.18	0.100	17	2.50		87.2	33-133	0.922	60	
Surr: Fluorene-d10	1.97		,,	2.50		78.8	25-105			
Surr: Pyrene-d10	2.67		,,	2.50		107	30-130			
Surr: Benzo (a) pyrene-d12	2.14		"	2.50		85.6	22-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety,

Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network**

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Steve Johnson

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Notes and Definitions

I-02 This sample was analyzed outside of the EPA recommended holding time.

Q-06 Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.

R-03 The reporting limit for this analyte was raised due to matrix interference.

S-07 Surrogate recovery is out of control limits. QA criteria are met when one surrogate is within control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.

wet Sample results reported on a wet weight basis (as received)

RPD Relative Percent Difference

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